AMENDMENTS TO THE CLAIMS

Please amend the claims as shown by the attached listing of claims:

Claims 1-116. (canceled)

117. (new) A method for diagnosis of congenital diseases of brain development, of disease resulting from tissue degeneration in the brain, or of schizophrenia, comprising assessing the level of mRNA encoding an Endooligopeptidase A (EOPA) enzyme or the amount or enzymatic activity of EOPA protein in brain tissue or cultured cells or assessing the binding of Lis1 or Disc1 protein to EOPA protein; a decreased level of EOPA mRNA or an decreased level of enzymatic activity of EOPA protein, or a decreased binding of Lis1 or Disc1 to EOPA being indicative of a congenital disease of brain development, a disease resulting from tissue degeneration in the brain, or of schizophrenia.

118. (new) The method of claim 117 in which the amount of EOPA protein is measured by an immunoassay using an antibody that specifically binds to EOPA.

119. (new) The method of claim 117 in which the enzymatic activity of EOPA is measured.

120. (new) The method of claim 119, in which the enzymatic activity of EOPA is measured by hydrolysis or the Phe^5-Ser^6 bond of bradykinin or by hydrolysis of the Arg^8-Arg^9 bond of neurotensin or by hydrolysis of a peptide mimetic of a neuropeptide.

121. (new) The method of claim 119, in which a fluorogenic peptide substrate is used.

122. (new) The method of claim 121, in which the fluorogenic peptide is Abz-GFAPFRQ-EDDnp (SEQ ID NO: 4).

123. (new) The method of claim 117, in which the binding of Lis1 or Disc1 to EOPA is measured.

124. (new) The method of claim 123, in which the EOPA has the amino acid sequence of SEQ ID NO: 3.

125. (new) The method of claim 123, in which an antibody that specifically binds to EOPA is used.

126. (new) The method of claim 117, in which an antibody that specifically binds to EOPA is used.

127. (new) A method for identifying a compound as effective in treatment for schizophrenia, for a congenital defect of brain development or for a disease resulting from brain tissue degeneration comprising measuring the activity of EOPA in neuropeptide inactivation or in neuropeptide biotransformation in the presence and in the absence of said compound; an increase in the activity of EOPA in the presence of the compound compared to the activity of EOPA in the absence of the compound indicating that the compound is effective in treatment for schizophrenia, congenital defect of brain development or a disease resulting from brain tissue degeneration.

128. (new) The method of claim 127, in which the activity of EOPA is measured by hydrolysis of the Phe^5-Ser^6 bond of bradykinin or by hydrolysis of the Arg^8-Arg^9 bond of neurotensin or by hydrolysis of a peptide mimetic of a neuropeptide.

129. (new) The method of claim 127, in which a fluorogenic peptide substrate is used.

130. (new) The method of claim 129, in which the fluorogenic peptide is Abz-GFAPFRQ-EDDnp (SEQ ID NO: 4).

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131. (new) A method for identifying a compound as effective in treatment for schizophrenia, for a congenital defect of brain development or for a disease resulting from brain tissue degeneration comprising measuring the binding of Lis1 and/or Disc 1 to EOPA in the presence and in the absence of said compound; an increase in the binding of Lis1 and/or of Disc1 to EOPA in the presence of the compound compared to the binding of Lis1 and/or of Disc1 to EOPA in the absence of the compound indicating that the compound is effective in treatment for schizophrenia, congenital defect of brain development or a disease resulting from brain tissue degeneration.

132. (new) The method of claim 131, in which an antibody that specifically binds to EOPA is used.

133. (new) A peptide of 7 to 13 amino acids that comprises a thiol reactive group and comprises an enkephalin peptide, said peptide having activity of an inhibitor of EOPA.

134. (new) The peptide of claim 133, in which the enkephalin peptide comprises an amino acid sequence RPPGFSPFR (SEQ ID NO: 5) or ELYEBKPRRPYIL (SEQ ID NO: 6).

135. (new) The peptide of claim 133, in which the enkephalin peptide is selected from the group consisting of bradykinin, neurotensin and dynorphin, and the thiol reactive group is N-pys.

136. (new) A peptide comprising a thiol reactive group and having an amino acid sequence YGGFL (SEQ ID NO: 7) or YGGFM (SEQ ID NO: 8), said peptide having activity of an inhibitor of EOPA.

137. (new) An antibody or antiserum that specifically binds to EOPA.

138. (new) The antibody or antiserum of claim 137, that has activity of inhibiting EOPA enzymatic activity.

139. (new) A method for specifically inhibiting EOPA comprising contacting EOPA with the peptides of claim 133.

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